

Work Order ID 57786

April 14, 2010 3:00:54 PM



Page 1

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 14/04/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 05/05/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: *BB*

Date: 10-4-14 Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr	Revision Nbr
D2580	Rev D

100

0.00



DOCUMENT CONTROL

DC

Memo 0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

N/A *JJ*

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo 0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio FT009

2-Cut tubes as per Dwg. D2580

10-4-26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center ID

120

Operation
Description

Skidtubes

Skidtubes

Set Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

Memo

0.00

1- Deburr ends

2- C'sink holes as per dwg without cutting fluid

3- Prepare tube for welding, remove alodine as required.

4- Scribe batch number insied aft end of tube.

Mb 2/27

130



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Sol 6/27

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Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center ID

140



Skidtubes

Operation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

Skidtubes

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and QSI 004
A/R□□□ Aluminum Rod

m113207

SE 10/04/27

2-Prep per QSI 005 and weld crossbolt spacers D2579 as per Dwg. D2580, QSI
004.For D2579 spacers, weld one side, pass 3/8" drill, weld other side, pass 3/8" drill
A/R□□□ Aluminum Rod

m113207

SE 10/04/27

3-Grind welds as per Dwg D2580 Grind flush ridge made from bending

MB 10/04/29

4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",
adjust stopper not to hit web. Deburr

Z SE 10/04/30

5-Counterbore crossbolt spacers to 7/16" ID x 1.0" deep as per Dwg D2580.
Deburr holes

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

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Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

0.00

S1064130

0.00

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S1064130

0.00

(4)

170



HandFinish

Pressure Wash per QSI005 4.3

0.00

Memo

0.00

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.

=7 m-k

10/05/03

(W)

W/O:		WORK ORDER CHANGES							
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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

180



Powdercoat

Powder Coating

Operation
Description

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

M114207

Set Up/
Run Hours

0.00

Draw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

=> M 10/05/03

1

4

0.00

=> M 10/05/04

1X

190



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

=> M 10/05/04

1X

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Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

200

Operation
DescriptionSet Up/
Run HoursDraw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

HandFinish

Hand Finishing

Memo

0.00

1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates

A/R Sikaflex-291

Sikaflex expire date:

M112429

10/08

2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580

3-Inspect for foreign object per QSI 024

4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive

A/R Sikaflex-291

Sikaflex expire date:

M112429

10/08

5-Wing Walk as per Dwg D2580 and QSI 005 4.4

Batch:

M113545

m-f 10/05/04

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Reference:

Approvals:

Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center ID

210



QC

Quality Control

Operation
Description

QC5- Inspect part completeness to step on W/O

Set Up/
Run Hours

0.00

Draw
NumberDraw
Rev.Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

5/10/05

(4)

220



Packaging

Packaging

0.00

0.00

Packaging

Identify and pack for shipping as per PPPD205-634-041
Location: FAP S 7027
PPP Rev: 5/10/05

230



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

10/05/17

W/O:		WORK ORDER CHANGES							
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April 14, 2010 3:00:59 PM

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Start Date: 14/04/2010

Required Date: 05/05/2010

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ

Start Qty: 1.00

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

Required Qty: 1.00

IPP Rev. O 06.02.28 Added paperwork EC

JPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

D2580-1



Manufactured No

110 Each 3.0000 1.0000



205 Skidtube bent detail

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

LG

57028

B57935

2

57188

1

D2576-3



Manufactured No

140 Each 121.0000 1.0000



Step (machining detail)

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

LG

121

46661



73

52215

48

D2579



Manufactured No

140 Each 113.0000 20.0000



Crossbolt Spacer

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

LG

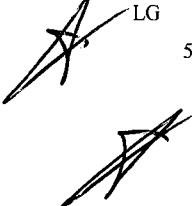
113

57052

113



B 10/04/27



B57348

12

B 10/04/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Start Qty: 1.00

IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD

IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Required Qty: 1.00

D2855



Manufactured No

200 Each 118.0000 1.0000



Cap

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

FP6

2

56613

2

Main Warehouse

ST026

116

50513

1

50770

30

51539

31

53791

54

10/05/04

M-k

AN3-5A



Purchased No

200 Each 1,017.0000 2.0000



Bolt

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST350

1017

105057

1017

~~QX M-k 10/05/04~~

W/O:		WORK ORDER CHANGES							
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IPP Rev. O 06.02.28 Added paperwork EC

IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Required Qty: 1.00

AN960JD10L



Purchased No

200

Each

4,591.000 2.0000



Washer

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST348

110985 ✓

4591

Loc Code

4591

ALS7-1032-130



Purchased No

200

Each

359.0000 50.0000



Insert

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST282

113238

M 114407

359

Loc Code

359

AN3C4A



Purchased No

200

Each

1,449.000 50.0000



BOLT

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

ST350

113226

1449

Loc Code

50

114103

501

114108

400

114330

498

W/O:		WORK ORDER CHANGES					
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IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Required Qty: 1.00

AN960C10L

washer

D3566-13

Gasket

Purchased No

200 Each 0.0000 50.0000

M114341



SOX M-k
10/05/04

Manufactured No

200 Each 52.0000 1.0000



<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Main Warehouse

FP

53461 ✓

52

52

D3566-5

Manufactured No

200 Each 10.0000 1.0000



10/05/04

1X M-L

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Main Warehouse

FP015

56829

10

10

1 X M-k
10/05/04

Gasket



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IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Required Qty: 1.00

D3566-1



Manufactured No

200

Each

25.0000

2.0000



Gasket

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

FP015

B5771S

25

2x m-l w/05/04

D3564-11



Manufactured No

200

Each

14.0000

1.0000



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

FP019

14

10/05/04

Main Warehouse

FP19

14

56834
57259 ✓

1

13

TX m-k

W/O:		WORK ORDER CHANGES							
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IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

D3564-13	Manufactured	No	200	Each	21.0000	1.0000	
----------	--------------	----	-----	------	---------	--------	--

Wearshoe

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP 3

56285 3

Main Warehouse

FP17 18

56533 ✓ 18

D3564-9



Manufactured

No

200

Each

12.0000

1.0000

Wearshoe

Warehouse Loc Qty Loc Code

Location

Main Warehouse

FP 1

55334 1

Main Warehouse

FP019 11

57260 ✓ 11

W/O:		WORK ORDER CHANGES					
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IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

D3564-5



Manufactured No

200

Each

12.0000

1.0000



Wearshoe

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

OFFSHORE

B 57525

FG

2

34806

2

Main Warehouse

FP

10

55024

1

55333

9

1x M-f
10/05/04

D2594-3



Manufactured No

200

Each

204.0000

16.0000



O-Ring, 205 Skidtube

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
------------------	----------------	-----------------

Location

Main Warehouse

FP

204

55546

204

B 58191

16 x M-f
10/05/04

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries

Picklist Print

April 14, 2010 3:00:59 PM

Page 8

Work Order ID: 57786



Parent Item: D205-634-041



Parent Item Name: Replacement Skidtube

Start Date: 14/04/2010

Required Date: 05/05/2010

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30 KJ
IPP Rev P 10.02.19 per PAR09-043 EC verified by:DD
IPP Rev. O 06.02.28 Added paperwork EC
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM

Start Qty: 1.00

Required Qty: 1.00

D2594-1



Manufactured No

200

Each

411.0000

16.0000



Plug, 205 Skidtube

<u>Warehouse</u>	<u>Loc Qty</u>	<u>Loc Code</u>
<u>Location</u>		
Main Warehouse	357826	
FP	411	
42807	112	
55002	299	

16X : M-h
W/05/04

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DESIGN <i>#</i>	DRAWN BY <i>EH</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

RELEASED
07.06.28 #

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AEIS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 57786
BS10-414

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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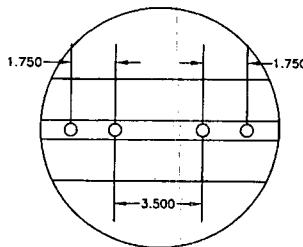
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DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

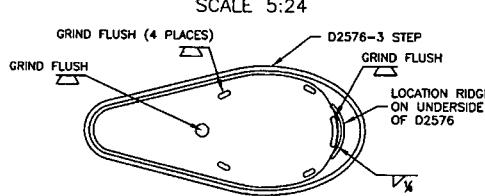
NOTE: Date & initial all entries

DETAIL A
SCALE 5:24

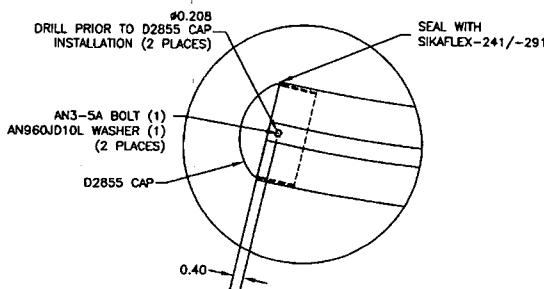


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07-06-28-07

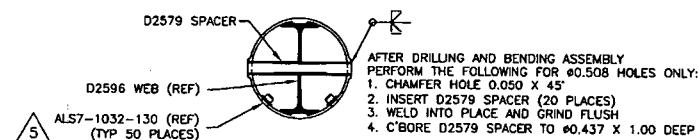
DETAIL B
SCALE 5:24



DETAIL C
SCALE 5:24



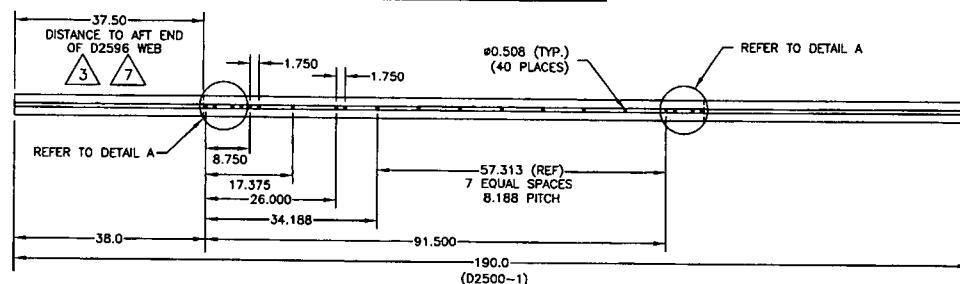
SECTION D-D
SCALE 5:24



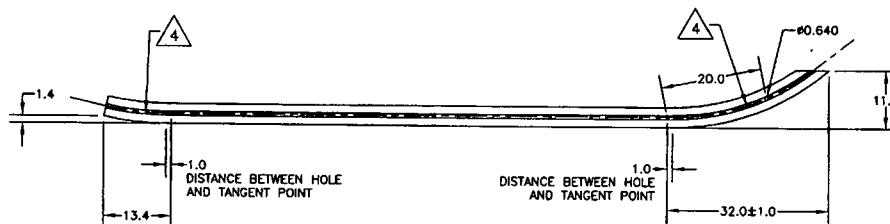
D2580-041 NOTES

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB POWDER COAT ASSEMBLY GLOSS WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3 BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

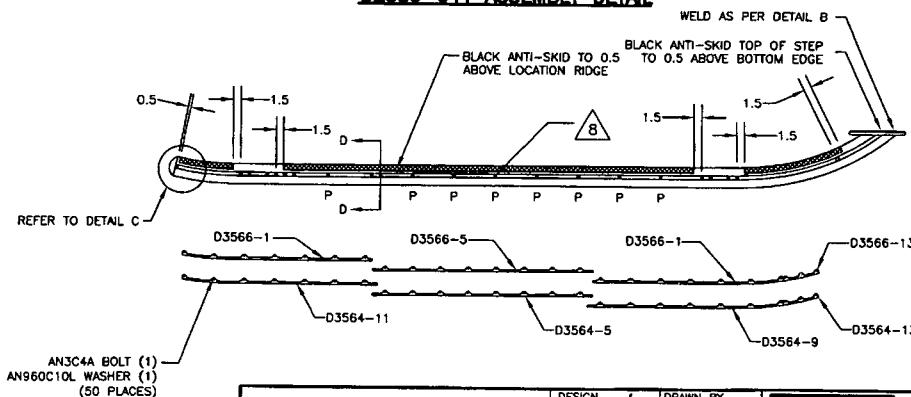
D2580-1 DRILLING DETAIL



D2580-1 BENDING AND CUTTING DETAIL



D2580-041 ASSEMBLY DETAIL



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CHECKED	APPROVED				REV. D DRAWING NO. D2580 SHEET 2 OF 3
DATE					SCALE 07.02.27 205 SKIDTUBE ASSEMBLY 1:24

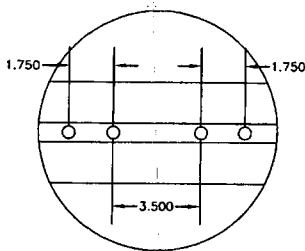
W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

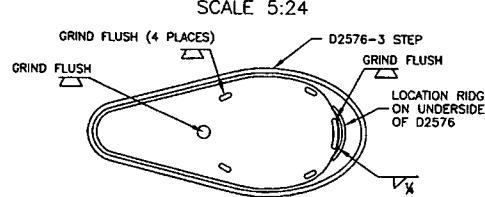
NOTE: Date & initial all entries

DETAIL E
SCALE 5:24



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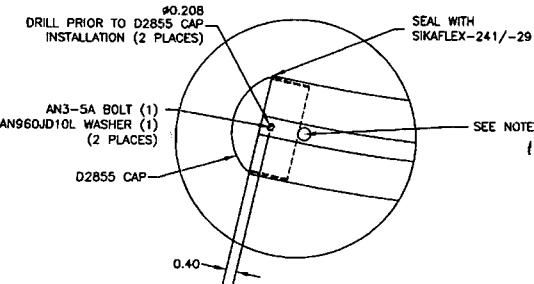
DETAIL F
SCALE 5:24



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07-14-28

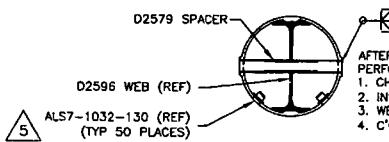
07 d. 28 of

DETAIL G
SCALE 5:24



wlo 57786

SECTION H-H
SCALE 5:24



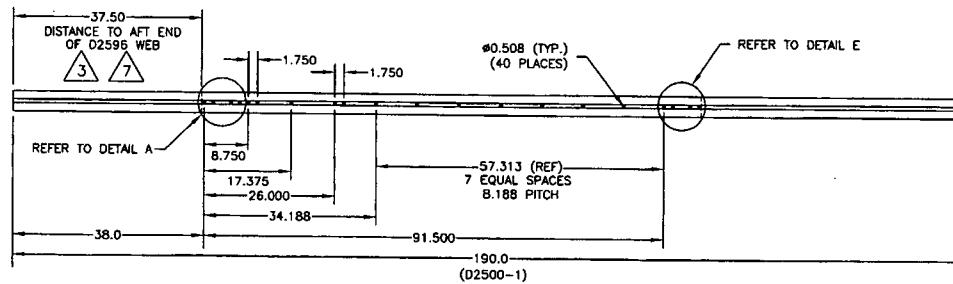
AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY:
1. CHAMFER HOLE .050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO #0.437 X 1.00 DEEP

80-215 NOTES

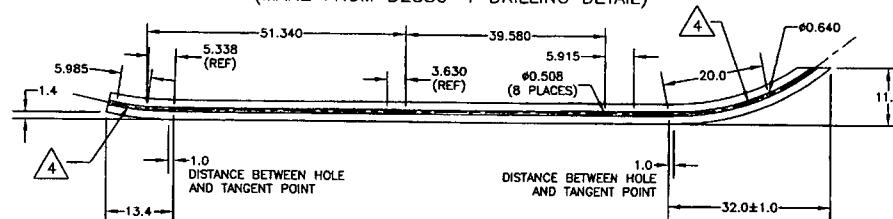
i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE
WITH THE SPACER AT THIS LOCATION

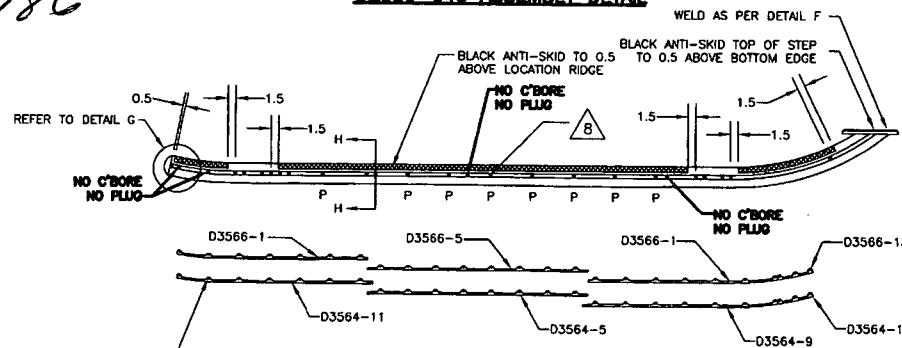
D2580-1 DRILLING DETAIL



D2580-5 BENDING AND CUTTING DETAIL
(MAKE FROM D2580-1 DRILLING DETAIL)



D2580-045 ASSEMBLY DETAIL



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COPYRIGHT © 1986 BY DART AEROSPACE LTD.		DESIGN <i>RH</i>	DRAWN BY <i>RH</i>	DART	DART AEROSPACE LTD. HAWKSBURY, ONTARIO, CANADA	
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		DATE 07.02.27	TITLE 205 SKIDTUBE ASSEMBLY	SCALE 1:24		
					SHEET 3 OF 3	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 220

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Harday Elliott
Job number: 576830
Part number: D205-634.041
Description: D205 skid tube
Welding Process: Tig[] Mig[]
Base material: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[] fail[]
Penetration: pass[] fail[]

UNACCEPTABLE

Cracks: pass[] fail[]
Undercut: pass[] fail[]
Pin holes: pass[] fail[]
Overlap (cold lap) pass[] fail[]
Porosity (surface): pass[] fail[]
Coloration: pass[] fail[]

Qualifier Harday Elliott Date of Test Coupon 10.04.27

Welder Harday Elliott Date of Test Coupon 10.04.27

The above named individual is qualified in accordance with AWS D17.1.2001 to weld